

CURRICULUM FOR E-TEACHING IN TEACHER EDUCATION - A CONCEPTUAL FRAMEWORK

By

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ABSTRACT

During the past few years a revolution has taken place in the teaching - learning process of education. Technology plays a significant role in imparting education at all levels i.e., from primary to higher. The focus of this article is to explore the importance and scope of e-teaching that is to be incorporated in the curriculum of teacher educators. The authors of this paper have prepared a model curriculum for e-teaching which can promote the effective use of educational technology in school education.

INTRODUCTION

It is recognized that the overall quality of education largely depends on the quality of teachers. A sound curriculum of professional preparation for teachers is essential for imparting quality education. Teaching is an art which can be inculcated through a series of well designed activities in respect of education and training of teacher educators.

India has one of the largest systems of teacher education in the world. Besides the university departments of education and their affiliated colleges, government & government aided institutions, self-financing colleges and open universities are also engaged in teacher education. Teacher education programmes are essentially institution-based. Their students need to be exposed more and more to the realities of school and community. The Internship programme, practice of teaching, practical activities and supplementary educational activities should have been better planned and organized more systematically.

Curriculum of Teacher Education - Present Status

The present curriculum of teacher education is flexible and responsive to the national, regional and local conditions. The theoretical and practical contents are properly blended. The components of Education,

psychology, philosophy, anthropology, ICT, etc., are included sufficiently. Further, for imparting practical experiences, internship training, practice of teaching, observation of model lessons, preparation of school records, modification of school, infrastructure and implementation of action research have been included in the practice of teacher education.

However, there is no consideration for the teaching components and contents for online teaching. Presently the education is in a state of transition from traditional methods to computer-mediated environments and most of the educators would probably have interest in "technology mediated classrooms". Since, it is a must to train/familiarize the teacher educators in e-teaching.

Meaning & Scope of e-teaching

Nowadays the alphabet "e" being attached to words has become more popular. With relative ease, "e" has been attached to activities like real estate, retailing, banking, entertainment and now in education. The "e" stands for electronic and it relates to the use of the internet to undertake a wide range of activities. As we become more familiar with the language of the internet we find how it pervades our daily lives in the dot.com age. Educators are now beginning to hear terms like e- teaching, e- learning and e- education as it subtly becomes a part of

our regular vocabulary.

The term "e-teaching" stands for all uses of information and communication technology in the teaching process of education. This includes computer labs, virtual learning environments, PDAs in classrooms etc. It is noted that e-teaching is increasingly becoming a reality in most universities. The use of IT in teaching holds a huge amount of potential and promise (cf. Alexander 2001). In general, the e-teaching improves the learning process. According to Goldman et. al. (1999) "At its best, technology can facilitate deep exploration and integration of information, high-level thinking, and profound engagement by allowing students to design, explore, experiment, access information, and model complex phenomena". This means that traditional learning is supported, but also that the borders of traditional learning are transcended. Lee (1999) has pointed out that learning will become possible outside traditional institutions and outside traditional frameworks.

The empirical research has shown that the use of technology in the right circumstances improve learning and overcome some of the barriers of learning found in traditional institutions (Piccoli et al. 2001). While technology may not be a panacea, it can enable the effective application of constructive, cognitive, collaborative, and socio-cultural models of learning" (Leidner and Jarvenpaa 1995, 288). One of the reasons for the success of e-teaching is that it is closely associated with one of the central features of educational processes, i.e., communication. Communication is the basis of any successful education, no matter what learning model or underlying theory one chooses. Since IT is a tool for the improvement of communication, it stands to reason that its use will result in an improvement of education (Hesketh et al. 1996). Communication can be improved between learners and teachers as well as between learners (Tress 2000).

Another expected advantage of e-teaching is that it can change the roles of educational process. Traditionally, teaching in universities is teacher-centered and teachers used to be elevated far above learners. Both of these aspects can be detrimental to learning. Through the use

of computers students' attitudes improve and learning becomes more student-centered (Piccoli et al. 2001). Thus the e-teaching increases the students' freedom and choice. Traditional instructional modes are often not suited to the use of technologies and will therefore have to be changed (Alavi 1994). The change of roles implies that the paradigm will change from push to pull, that means while the students will be allowed and required to take greater control of their own education, the instructor's role will change to that of a facilitator or coach (Ives and Jarvenpaa 1996).

E-teaching in the curriculum of Teacher Education

E-education involves e-teaching and e-learning along with the various administrative and strategic measures needed to support teaching and learning in an Internet environment. Hence it is necessary to include the appropriate components, contents and methods for e-teaching in the existing curriculum for teacher education, as like for other subject areas viz. language education, science education, mathematics education, social science education etc.

In order to enhance the success of e-teaching, teachers must fulfill several non-trivial conditions. They must have a certain level of proficiency in using computers and other information and communication technology tools. It has been shown that familiarity with computers is necessary for successful e-teaching (Piccoli et al. 2001; Leidner and Jarvenpaa 1995). Further, if one is capable to use a computer and web technologies, then he can realize the needs of psychological requirements, the ability to work unsupervised, a general attitude toward technology etc. These requirements, if not met with, can jeopardize even the best-prepared attempt of e-teaching.

Model Curriculum for e-teaching

In the spirit of innovation, the early adopters have been given time and space to explore a range of opportunities and possibilities without too many *rules* to bar their progress. As time passed more and more people became interested and were absorbed by the teaching and learning potentials of Internet for themselves as teachers, and for their e-literate students. The possibilities

and vision for e-education is becoming stronger and stronger with a clear need for an e-education strategy that compliments the ICT strategies of the future. Hence the existing curriculum for teacher education should facilitate the essential tools and strategies for the effective design, development, and delivery of online instruction. It should include a learner-centered curriculum that provides practical applications for online teaching, learning, and assessment. As the teaching practices given for other subject methods like Language, Physical Science, Mathematics, Social Science, Biological Science and Computer Science, e-teaching is also considered for teaching practices during the course period. Considering this, the existing curriculum for teacher education should include the e-teaching components, contents and methods. The teacher education students should be moulded to select appropriate online instructional techniques to accomplish learning objectives, apply learning theory and instructional design principles to design a course and instructional materials for online delivery, facilitate online communication and collaboration, determine appropriate types of assessment and evaluation for online learning, and manage online instruction using acquired techniques. To acquire the above skills and knowledge, the teacher education students have to be exposed to the following concepts in both theoretical as well as practical aspects.

Level I: Introduction to Online Learning

Understanding Online Learning

- Components of online learning
- Differences between online and traditional learning
- Advantages and limitations of online learning

Preparing for online teaching and learning

- The role of the instructor in the online learning environment
- The role of the learner in the online learning environment
- Assessing online teaching and learning readiness
- Impact of learning theories/learning styles/types of

learners

Level II: Designing Instruction for the Online Environment

Instructional Design

- Planning course content and organization
- Developing goals and objectives
- Reviewing types of online courses
- Locating and evaluating online courses in your academic discipline

Online Course Development

- Locating and evaluating appropriate Web resources
- Developing new course content
- Preparing existing materials for online instruction
- Designing and implementing assignments

Practical

- Writing and posting students own syllabus and course calendar.
- Creating their own online course/workshop. This can include resources discovered by students. That can be either already used in online or new material.
- Design appropriate assignments.

Level III: Communication and Online Learning

Fundamentals of Online Communication

- Types of online communication tools
- Identifying effective communication techniques for online learning

Communication and Collaboration

- Establishing an online community
- Principles of collaboration
- Managing team-based learning

Practical

- Introducing faculty to the students using the faculty information homepage.
- Posting the course "communications" policies that establish expectations for:
 - Sending and responding to email
 - Posting to discussion boards, communicating in chat rooms, etc.

- Creating two discussion forums for a class - one to serve as a community - building warm-up activity at the beginning of the semester and the other focused on discussing a particular aspect of the course content.
- Setting up one general chat session for the class that includes instructions for access (date and time) and the activity/topic for the session.

Level IV: Assessing Online Learning

Models of Assessment Theory

- Applying assessment theory to online education
- Quantitative and qualitative methods of assessment
- Course evaluation techniques

Developing and Selecting Appropriate Assessment Measures

- Providing learning feedback
- Utilizing peer reviews
- Assessing group assignments
- Evaluating learner progress

Practical

- Develop and create course-appropriate and learner centered methods of online assessment to add with course.

Based on the above concepts, the educators, thinkers and professional experts may prepare the appropriate course content, methods etc. for teacher education students. Accordingly the policy makers and the regulatory bodies of teacher education should demand the necessary laboratory, equipment and staff facilities for all teacher education institutions.

Conclusion

The curriculum for teacher preparation, in future has to encompass the broader canvas, which is consistently emerging before the teachers and shall continue to change at a much faster pace in times ahead. Teachers must have a global view of the new trends, strategies and practices, and focus on indigenous heritage and thoughts. The teacher education programmes should

focus on competencies and commitment in the field of e-teaching in future. Hence, if the existing curriculum for teacher education includes the components, content and the appropriate methods for e-teaching in future, definitely the nation can have quality e-teachers and satisfy the needs of the society.

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